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July 15, 2005

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Response to NRC Request for Additional Information Re: NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors" (TAC Nos. MC4672 and MC4673)

REFERENCES:

(a) Letter from Mr. R. V. Guzman (NRC) to Mr. G. Vanderheyden (CCNPP), dated June 3, 2005, Calvert Cliffs Nuclear Power Plant, Units 1 and 2 – Request for Additional Information (RAI) Related to Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Sump Recirculation during Design Basis Accidents at Pressurized-Water Reactors" (TAC Nos. MC4672 and MC4673)

(b) Letter from Mr. G. Vanderheyden (CCNPP) to Document Control Desk (NRC), dated March 3, 2003, Response to NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors"

(c) NRC Generic Letter 2004-02: Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors

By letter dated June 3, 2005 (Reference a), you requested additional information regarding Calvert Cliffs Nuclear Power Plant, Inc.'s (CCNPPs) 90-day response (Reference b) to Generic Letter (GL) 2004-02 (Reference c). Also, in Reference (a), you noted that additional information was needed to process the extension we requested in Reference (b). We will provide additional information for the extension request in our September 1, 2005, response to GL 2004-02. Information to address the other specific questions in Reference (a) are provided below.

Requested Information (1)

On page 2 of your GL 2004-02 response, you stated that the susceptibility of the Unit 1 emergency core cooling system and containment spray system recirculation functions to the adverse effects identified in

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GL 2004-02 was analyzed using the guidance in NEI 04-07. You did not provide a description of the methodology to be used for the Unit 2 analyses. As requested in GL 2004-02, please provide a description of methodology to be used in the Unit 2 analyses and the planned completion date.

Calvert Cliffs' Response

An adverse effects analysis will not be performed for Unit 2 because Unit 2 is nearly identical to Unit 1 and, the self-cleaning strainer device we will install in both Units is generally not affected by debris loading (adverse effects). Please note the Unit 1 analysis will be used to design the self-cleaning strainer for both units. A separate Unit 2 design analysis will not be performed. Additionally, in designing the new self-cleaning strainer, appropriate margin will be added to account for any future changes which might occur.

Requested Information (2)

In addition, your response did not provide a discussion of your plans or schedule for addressing chemical and downstream effects. Although the GL did not specifically request that the evaluation of these effects be discussed in the 90-day response, please discuss your plans and schedule for evaluating chemical and downstream effects and verify whether your September 1, 2005, response will include an evaluation of these effects.

Calvert Cliffs' Response

One of the design criteria CCNPP has established with the vendor of the self-cleaning strainer is for the self-cleaning strainer to be capable of keeping the active strainer flow clean in the event chemical precipitation occurs. Preliminary testing done in January 2005 indicates that this criterion can be met. A final test that meets CCNPP quality standards is currently scheduled to occur in the summer of 2005. At this time, it is unknown whether the vendor report documenting the results of this testing will be available in time to be included in the September 1, 2005 response to the Generic Letter. However, once the testing is complete the conclusions from that testing will be shared with the NRC Staff.

As part of the design evaluation of the replacement sump strainer, CCNPP will document that the replacement strainer adequately maintains the functionality of the Emergency Core Cooling System/Reactor Coolant System downstream components. The following key elements of this evaluation are based on WCAP-16406-P, "Evaluation of Downstream Sump Debris Effects in Support of GSI-191."

1. To ensure that bypass flow from the active strainer will not cause unacceptable blockage at the fuel grid strainer and cause unacceptable levels of debris to accumulate in the lower plenum of the reactor vessel, a flow test that meets CCNPP quality standards will be performed by the vendor. This testing is also scheduled to occur in the summer of 2005, and published results may not be available in time to support the September 1, 2005 Generic Letter response. We will discuss the status of this effort in the September 1, 2005 response. The current schedule for completion of this effort is November 30, 2005.

2. Calvert Cliffs is currently working with the vendor of the high pressure safety injection pumps to determine whether debris entrained in the water could cause damage to the pump. We intend to discuss the status of this effort in our September 1, 2005, response. The current schedule for completion of this effort is October 12, 2005.

3. The other evaluation elements identified in WCAP-16406-P address passive sump strainer designs. Our review of these elements should be bounded by the evaluation currently performed

for our existing strainer. The completion date to document the evaluation of the other items identified in WCAP-16406-P is December 14, 2005.

As these elements are completed, we will provide information concerning the results to the NRC Staff. At this time, we do not foresee changes to the active strainer design chosen for installation at CCNPP Units 1 and 2.

Should you have questions regarding this matter, please contact Mr. L. S. Larragoite at (410) 495-4922.

Very truly yours,

STATE OF MARYLAND :
: **TO WIT:**
COUNTY OF CALVERT :

I, George Vanderheyden, being duly sworn, state that I am Vice President - Calvert Cliffs Nuclear Power Plant, Inc. (CCNPP), and that I am duly authorized to execute and file this response on behalf of CCNPP. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other CCNPP employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.

Subscribed and sworn before me, a Notary Public in and for the State of Maryland and County of St. Mary's, this 15th day of July, 2005.

WITNESS my Hand and Notarial Seal:

Janet L. Scully
Notary Public

My Commission Expires:

March 25, 2007
Date

GV/GT/bjd

cc: P. D. Milano, NRC
S. J. Collins, NRC
Resident Inspector, NRC
R. I. McLean, DNR